

## Supporting Information

### Linkage and Acceptor Effect on Diverse Memory Behavior of Triphenylamine-Based Aromatic Polymers

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#### List of Contents for Supplementary Material:

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<b>Figure S1.</b> IR spectra of (a) polyether OXPE and (b) polyester 6FPET .....	<u>SI-2</u>
<b>Figure S2.</b> TGA thermograms and DSC traces of 6FPET and OXPE.....	<u>SI-2</u>
<b>Figure S3.</b> Reduction cyclic voltammetric diagrams of <b>6FPI</b> and <b>6FPI'</b> films on an ITO-coated glass substrate over cyclic scans.....	<u>SI-3</u>
<b>Figure S4.</b> Calculated molecular orbitals and corresponding energy levels of the basic units (BU) for TPA-based sulfonyl-containing polymers.....	<u>SI-4</u>
<b>Table S1.</b> Molecular Weights.....	<u>SI-5</u>
<b>Table S2.</b> Solubility Behavior.....	<u>SI-5</u>

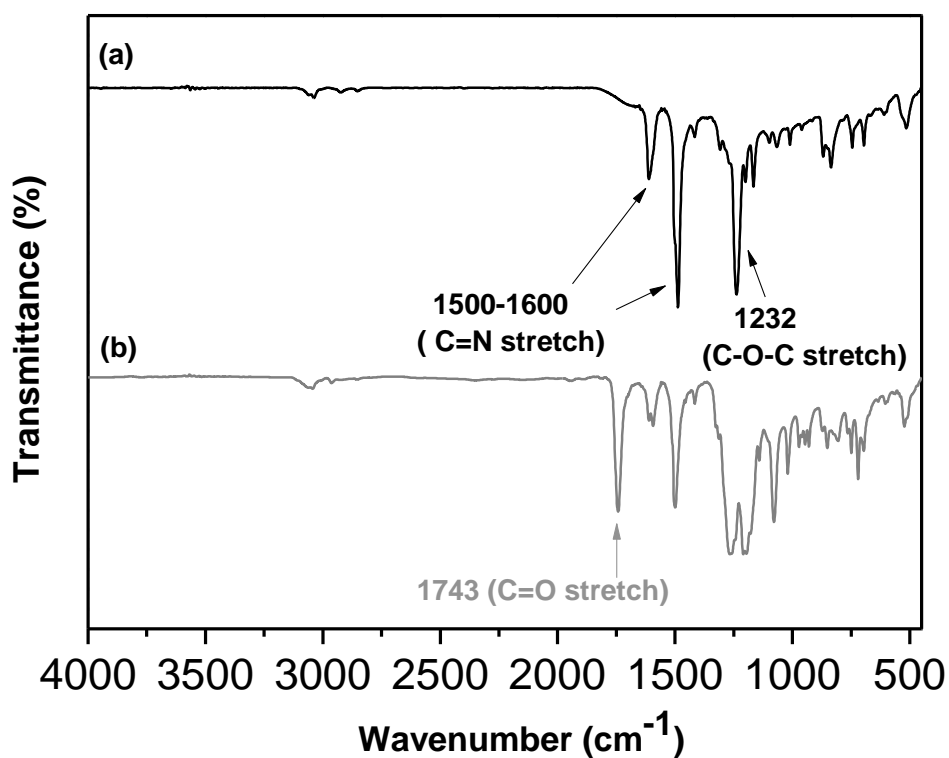


Figure S1. IR spectra of (a) polyether OXPE and (b) polyester 6FPET.

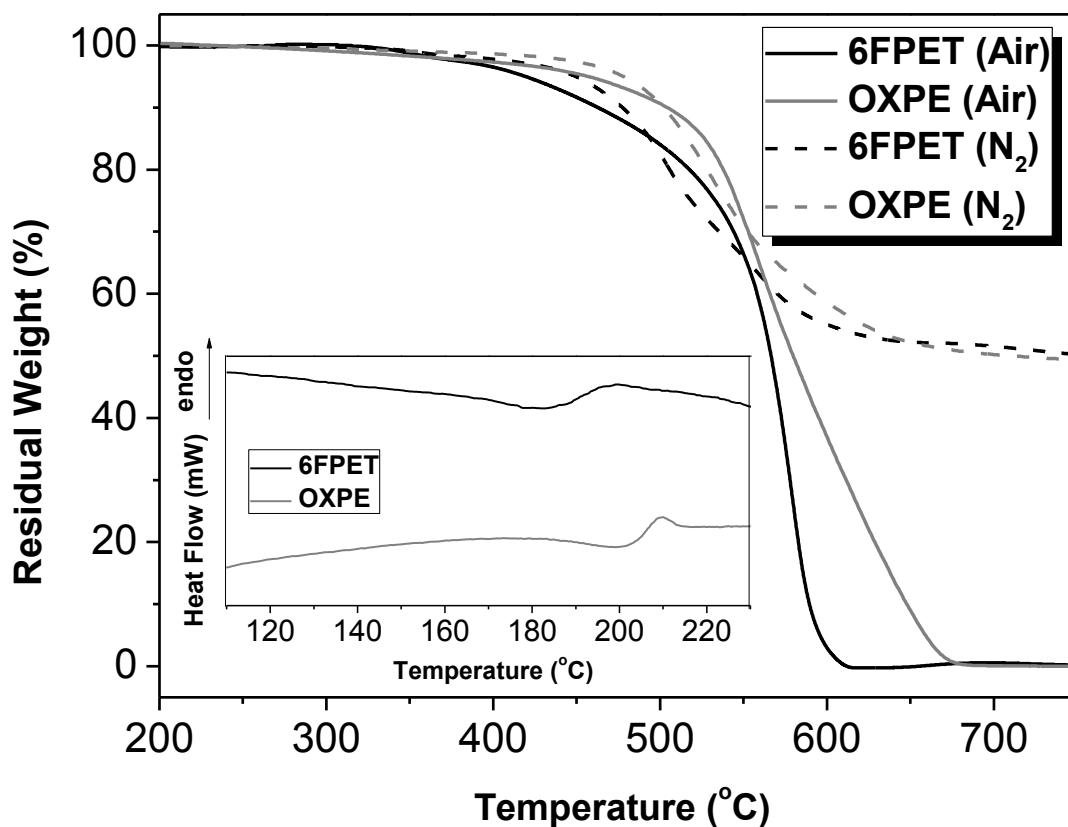
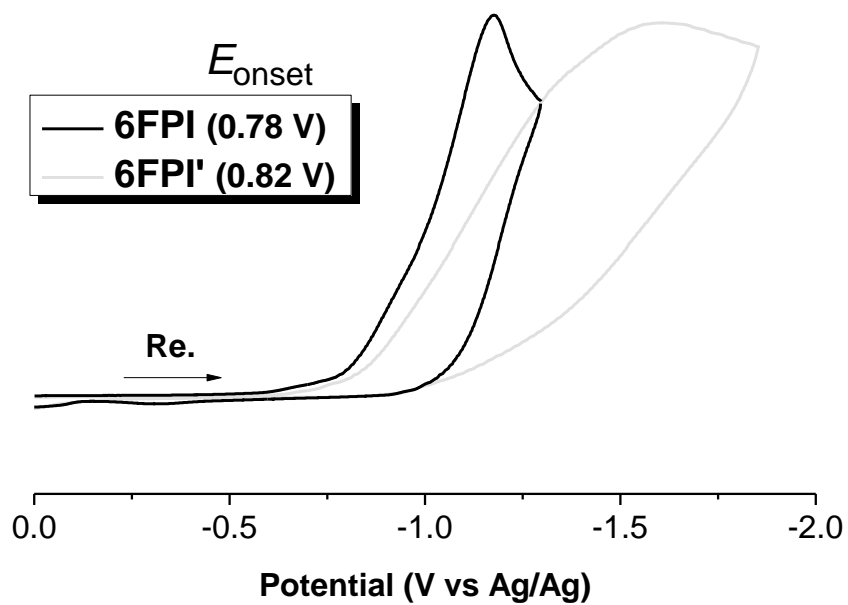
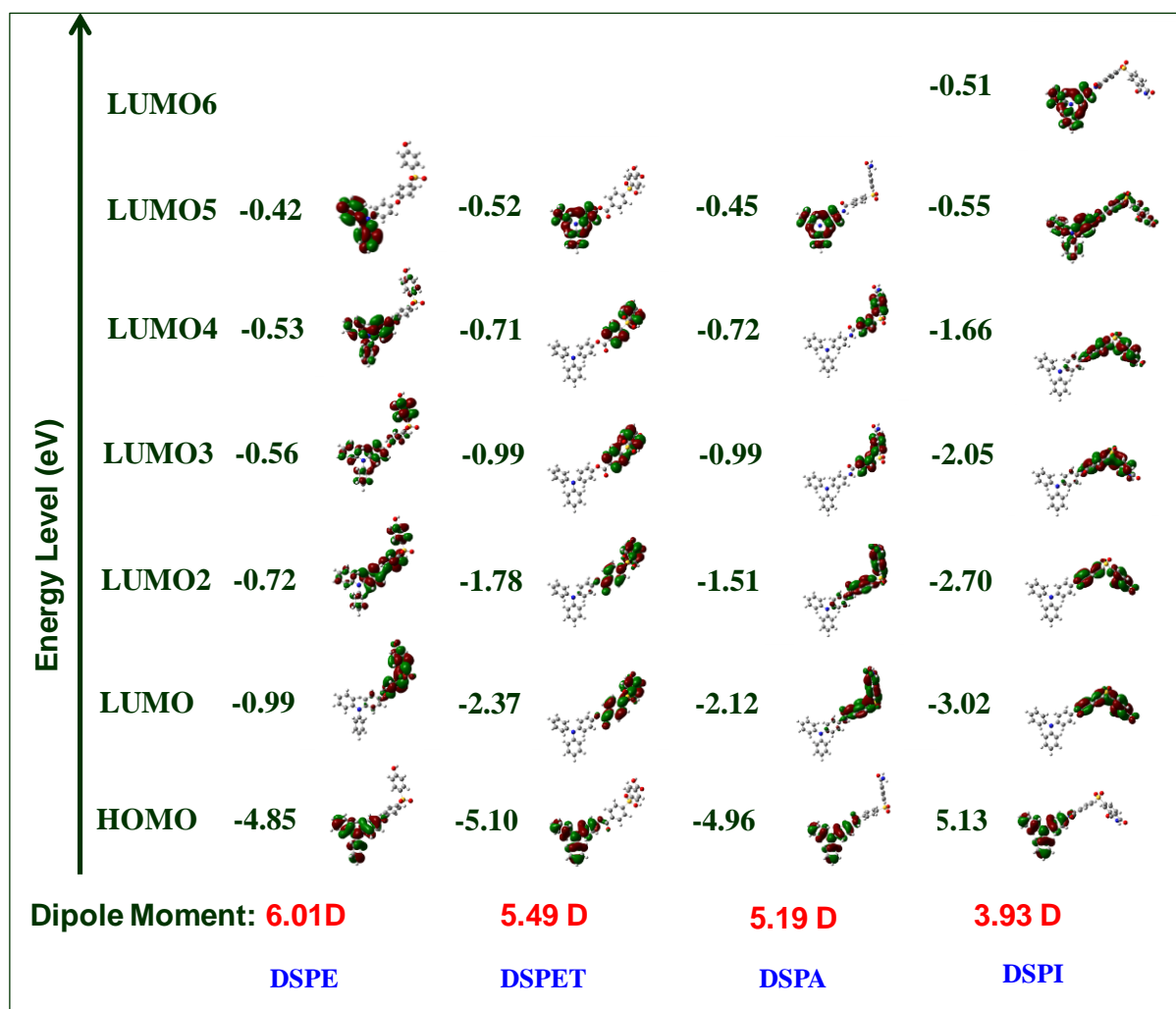


Figure S2. TGA thermograms and DSC traces of 6FPET and OXPE.



**Figure S3.** Reduction Cyclic voltammetric diagrams of **6FPI** and **6FPI'** films on an ITO-coated glass substrate over cyclic scans.



**Figure S4.** Calculated molecular orbitals and corresponding energy levels of the basic units (BU) for TPA-based sulfonyl-containing polymers.

**Table S1.** Molecular Weights<sup>d</sup>

Polymer	$\eta_{inh}^a$ (dL/g)	$M_w^b$	$M_n^b$	PDI <sup>c</sup>
<b>OXPE</b>	0.27	62,000	24,000	2.58
<b>6FPET</b>	0.28	76,000	30,000	2.53
<b>6FPA</b>	0.75	123,500	67,000	1.84
<b>6FPI</b>	0.57	166,000	93,000	1.78
<b>6FPI'</b>	0.63	99,500	52,000	1.91

<sup>a</sup> Measured at a polymer concentration of 0.5 g/dL in DMAc at 30 °C.

<sup>b</sup> Calibrated with polystyrene standards, using NMP as the eluent at a constant flow rate of 0.5 mL/min at 40 °C.

<sup>c</sup> Polydispersity Index ( $M_w/M_n$ ).

**Table S2.** Solubility Behavior

Code	Solubility in various Solvent <sup>a</sup>						
	NMP	DMAc	DMF	THF	CHCl <sub>3</sub>	DMSO	<i>m</i> -cresol
<b>OXPE</b>	++	++	+	+	++	–	+
<b>6FPET</b>	++	++	+–	++	++	–	+

<sup>a</sup> The solubility was determined with a 10 mg sample in 1 mL of a solvent. ++, soluble at room temperature; +, soluble on heating at 70°C-80°C; +–, partially soluble or swelling; –, insoluble even on heating.